

**Notice of Allowability**

Application No.

10/784,609

Examiner

Hadi Shakeri

Applicant(s)

COCHRAN ET AL.

Art Unit

3723

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to phone interview on 11/08/05.
2. ☒ The allowed claim(s) is/are 1-5,7-10,12-18,20-26,31 and 32.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 100805.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

Hadi Shakeri

**HADI SHAKERI** Primary Examiner  
Art Unit 3723  
November, 08 2005

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### EXAMINER'S AMENDMENT

1. An extension of time under 37 CFR 1.136(a) is required in order to make an examiner's amendment which places this application in condition for allowance. During a telephone conversation conducted on Monday November 8, 2005, Mr. Meyer requested an extension of time for extra (1) MONTH(S) and authorized the Director to charge Deposit Account No. 23-3030 the required fee of \$165 (\$225 minus \$60) for this extension and authorized the following examiner's amendment. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

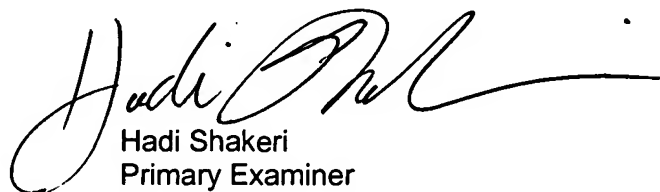
The application has been amended as follows:

**Please replace the claims with the new listing attached (starting on page 3)**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hadi Shakeri whose telephone number is 571-272-4495. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail, III can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Hadi Shakeri  
Primary Examiner  
Art Unit 3723

hs  
November 7, 2005

1. (Currently amended) A grinding machine comprising:
  - a. a surface following frame to be moved along a surface to be ground;
  - b. an hydraulic grinding assembly mounted to said frame;
  - c. a mechanism causing said grinding assembly to be raised and lowered relative to said frame in a predetermined pattern;
  - d. a displacement wheel mounted to said frame and mechanically linked to said mechanism; and
  - e. a bell crank pivotally mounted to said frame and an activation rod linking said bell crank and said displacement wheel, wherein said rod is oriented to advance and retract in association with rotation of said displacement wheel, wherein advancement and retraction of said activation rod causes said bell crank to actuate said raising and lowering mechanism.
2. (Original) The grinding machine of claim 1 wherein said predetermined pattern is actuated by the advancement of said frame.
3. (Original) The grinding machine of claim 2 wherein said grinding assembly is pivotally mounted to said frame.
4. (Previously Presented) The grinding machine of claim 2 wherein said mechanism for raising and lowering said grinding assembly comprises at least one hydraulic piston.
5. (Original) The grinding machine of claim 2, wherein said mechanism for raising and lowering said grinding assembly comprises a pivot arm.
6. (Cancelled)

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7. (Previously Presented) The grinding machine of claim 1, wherein said raising and lowering mechanism is hydraulically assisted.
8. (Original) The grinding machine of claim 7, comprising an hydraulic control valve mounted on said grinding assembly.
9. (Previously Presented) The grinding machine of claim 1, wherein said displacement wheel is mounted forward of said frame.
10. (Previously Presented) The grinding machine of claim 1, wherein said displacement wheel supports said frame over the surface to be ground.
11. (Cancelled)
12. (Currently Amended) The grinding machine of claim 1, wherein said activation rod is eccentrically mounted to said displacement wheel.
13. (Original ) The grinding machine of claim 7, wherein said raising and lowering mechanism comprises at least one hydraulic piston mounted between said frame and said grinding assembly.
14. (Previously Presented) The grinding machine of claim 13, comprises an hydraulic valve actuated by said displacement wheel to extend and retract said at least one hydraulic piston.
15. (Original) The grinding machine of claim 2, wherein said frame comprises ground support elements.
16. (Original) The grinding machine of claim 15, wherein said ground support elements are selected from a group consisting of wheels, rollers and skids.

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17. (Original ) The grinding machine of claim 2, wherein said frame is mounted to a host machine.

18. (Currently Amended) A grinding machine, comprising:

- a. a surface following portion to be moved at a uniform height along a surface to be ground having front and rear ground support elements;
- b. an hydraulic grinding assembly mounted to said surface following portion;
- c. a gauge wheel associated with said surface following portion and in contact with the surface to be ground;
- d. a rotating pattern wheel associated with said surface following portion, wherein said pattern wheel is axially offset from and driven by said gauge wheel and;
- e. at least one hydraulic piston linked to said pattern wheel to hydraulically raise and lower said grinding assembly relative to said surface following portion and said front and rear ground support elements to grind depressions in the surface in correspondence with the rotation of said gauge wheel.

19. (Cancelled)

20. (Previously Presented) The grinding machine of claim 18, wherein said pattern wheel is driven by a sprocket chain driven by said gauge wheel.

21. (Previously Presented) The grinding machine of claim 18, comprising a bell crank mounted to said surface following portion, with one bell crank arm linked to said pattern wheel, wherein rotation of said pattern wheel causes said bell crank to rotate, and wherein rotation of said bell crank actuates said raising and lowering mechanism..

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**22.** (Original ) The grinding machine of claim 21, wherein said one bell crank arm is linked to said pattern wheel via an actuation rod.

**23.** (Original) The grinding machine of claim 21 , said bell crank is biased to a position where said grinding assembly is raised, and wherein said pattern wheel is linked to said bell crank to periodically urge said bell crank to a position where said grinding assembly is lowered.

**24.** (Original) The grinding machine of claim 22, wherein a second bell crank arm is coupled to an hydraulic valve which operates an hydraulic cylinder to raise and lower said grinding assembly.

**25.** (Original) The grinding machine of claim 24, wherein the arms of said bell crank span an angle of approximately 85 degrees.

**26.** (Original) The grinding machine of claim 18, wherein said gauge wheel is spring biased to contact the ground.

**27.** (Cancelled)

**28.** (Cancelled)

**29.** (Cancelled)

**30.** (Cancelled)

**31.** (Previously Presented) The grinding machine of claim 18, comprising an actuation rod linked to said hydraulic piston, and eccentrically linked to said pattern wheel.

**32.** (Previously Presented) The grinding machine of claim 31, wherein said actuation rod is linked to a sliding member in a track defined on said pattern wheel.